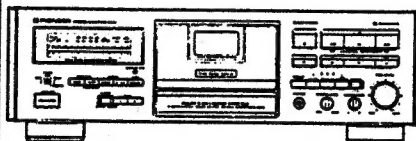


Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
ARP2758

STEREO CASSETTE DECK

CT-95

CT-S920S

CT-S920S-G

CT-95, CT-S920S AND CT-S920S-G HAVE THE FOLLOWING:

Type	Model			Power Requirement	Remarks
	CT-95	CT-S920S	CT-S920S-G		
HEM	○	○	○	AC220 - 230V, 240V (switchable) *	
SD	○	-	-	AC110V, 120 - 127V, 220V, 240V (switchable)	

* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the following: CT-95/HEM and SD; CT-S920S/HEM; CT-S920S-G/HEM.
- For the following: CT-95/SD; CT-S920S/HEM; CT-S920S-G/HEM, refer to page 37.
- CT-S920S-G is the same as CT-S920S except for color.

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PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
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1. EXPLODED VIEWS AND PARTS LIST

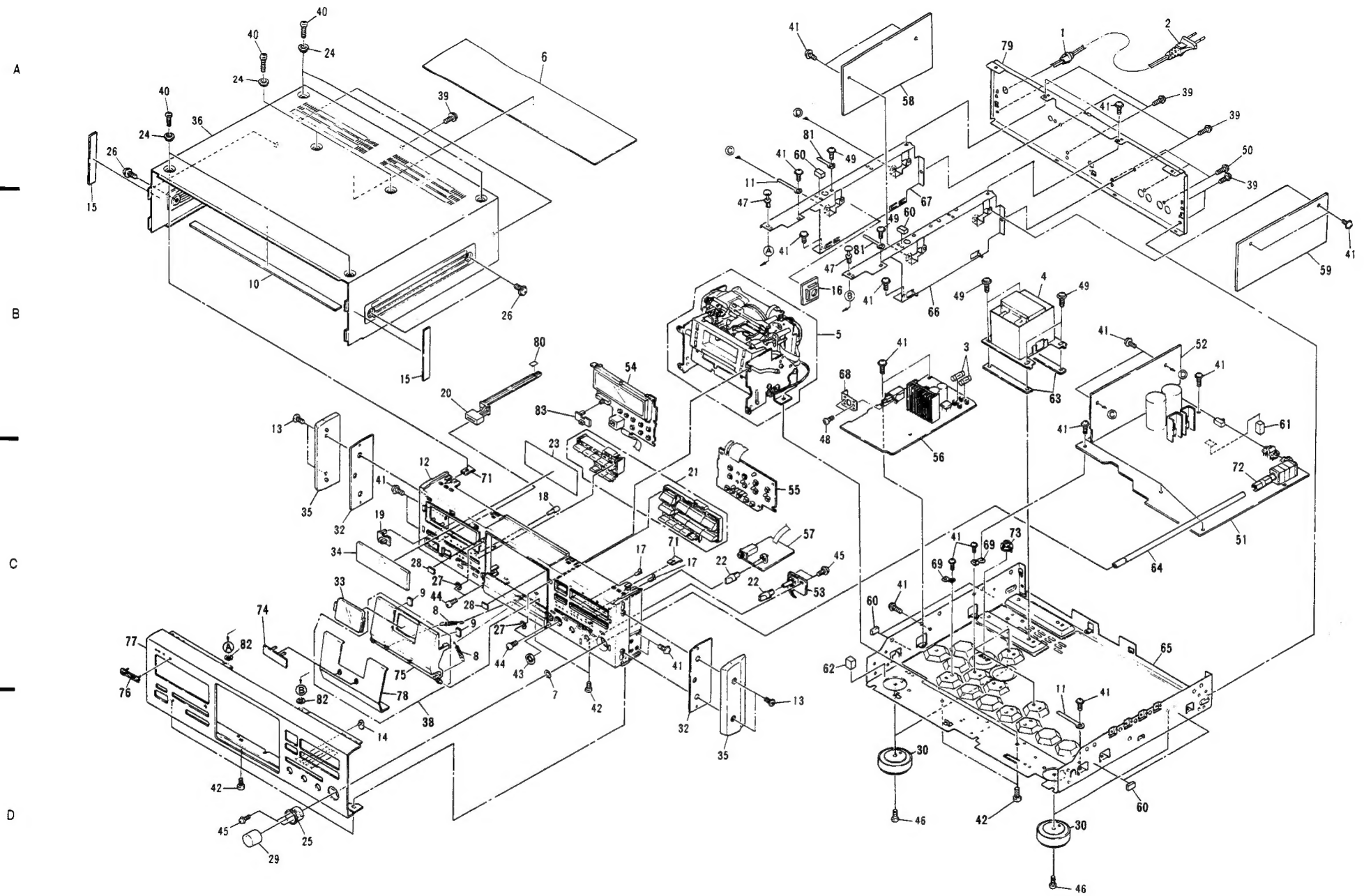
1.1 EXTERIOR

NOTES:

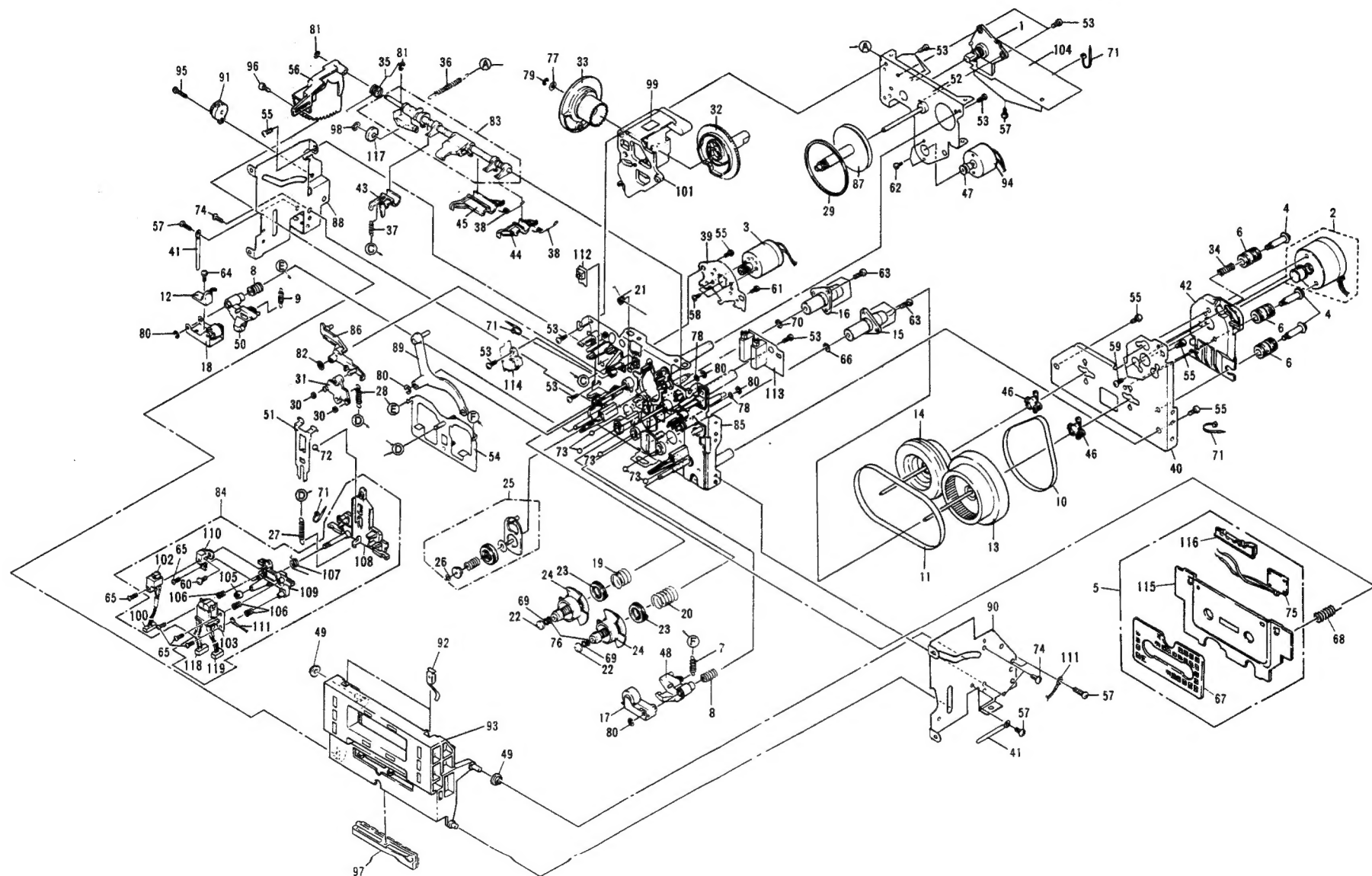
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "O" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
Δ	1	Strain relief	CM - 22B		41	Screw	IBZ30P080FCC
Δ	2	AC power cord	ADG1036		42	Screw	BBT30P100FZK
Δ	3	FU601, FU602 Fuse (T2A)	REK - 103		43	Nut	RBN - 006
Δ	4	T1 Power transformer	RTT1201		44	Screw	BBZ30P080FZK
O	5	Mechanism unit	RYM1185		45	Screw	BBZ26P080FZK
	6	Absorb plate (B)	PNB1109		46	Screw	IBZ30P150FCC
	7	Washer	REF1019		47	Nylon rivet	RBM - 003
	8	Door coil spring	REH1306		48	Screw	PMA30P060FCU
	9	Door cushion	REB1174		49	Screw	IBZ40P080FCC
	10	Protector	RED1020		50	Screw	IBZ30P100FCC
	11	Cord clasper	RNH - 184		51	Main unit	RWX1081
	12	Panel stay	RNT1176		52	Control unit	RWZ2984
	13	Screw	ABA1131		53	BAL. VR unit	RWZ2985
	14	LED lens	AMR1160		54	FL unit	RWZ2986
	15	Side spacer	PNM1150		55	Operation unit	RWZ2987
NSP	16	Holder	PNW1021	NSP	56	Bias unit	RWZ2988
	17	lens S	PNW1893	NSP	57	Headphone unit	RWZ2989
	18	Counter reset knob	RAA1009	NSP	58	Encode unit	RWZ2743
	19	Side SW knob	RAC1540	NSP	59	Decode unit	RWZ2744
	20	Power button	RAC1657	NSP	60	Rubber spacer (A)	REB1057
	21	Control knob	RAC1658	NSP	61	Rubber spacer	REB1192
	22	Balance knob	RAC1662	NSP	62	Rubber spacer	REB1187
	23	FL filter	RAH1936	NSP	63	Transformer sheet	REE1004
	24	collar	RAT1002	NSP	64	VR shaft	RLA1169
	25	VR ring	RAT1012	NSP	65	Main chassis	RNB1042
	26	Screw	RBA1088	NSP	66	Center stay	RNC1068
	27	Washer	REC1180	NSP	67	Center stay	RNC1069
	28	Door sheet	REB1191	NSP	68	PS holder	RNE1185
	29	VR knob assembly A	RXA1439	NSP	69	PCB base	RNE1221
	30	Leg assembly	AMR1159		70	.....
	31	.....		NSP	71	Bonnet bracket	RNE1470
	32	Side spacer	PEB1197	NSP	72	Joint	RNK1333
	33	Door lens	RAH1927	NSP	73	PCB stud	RNL - 792
	34	FL lens	RAH2019		74	Badge	RAN1006
	35	Side panel	RAH1931	NSP	75	Door	RNK1756
	36	Bonnet	RXX1427		76	Badge	RAN1011
	37	.....			77	Front panel	RAH2280
	38	Door assembly	REA1002	NSP	78	Door panel	RAH2133
	39	Screw	IBZ30P060FCC	NSP	79	Rear panel	RNA1718
	40	Screw	RBA1098		80	Acetate tape	REH1020
				NSP	81	Cord clasper	DNF1128
				NSP	82	Washer	RBF1017
					83	Slide SW knob	RAC1540



1.2 MECHANISM UNIT



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Rotary encoder	RX1004	51	Head base set spring	RBL - 026	
	2	Capstan motor assembly	RXM1016	52	Gear chassis assembly	RXA1171	
	3	Reel motor assembly	RXM1018	53	Screw	BBZ26P080FZK	
	4	Step screw	RBA1074	54	Pinch base assembly	RXB - 878	
	5	Cassette plate assembly	RXX1064	55	Screw	BBZ30P080FZK	
	6	Insulator	REB1099	56	Eject lever	RNK1763	
	7	Pinch spring	RBL - 028	57	Screw	BCZ30P060FMC	
	8	Pinch thrust spring	RBL - 030	58	Screw	BMZ26P030FZK	
	9	Sub - pinch spring	RBL - 098	59	Screw	BMZ26P040FMC	
	10	Capstan belt	REB - 501	60	Screw	BMZ26P060FZK	
	11	Capstan belt (A)	REB - 509	61	Screw	BMZ30P080FZK	
	12	Tape guide	RNK1823	62	Screw	PMZ30P040FMC	
	13	Flywheel assembly	RXA1374	63	Screw	PMA26P050FZK	
	14	Sub - flywheel assembly	RXA1375	64	Screw	PMA26P060FZK	
	15	Metal holder assembly (A)	RXA1426	65	Screw	PMZ20P080FZK	
	16	Metal holder assembly (B)	RXA1343	66	Washer	RBF - 030	
	17	Pinch roller arm (R) assembly	RXB - 876	67	Stabilizer B	REB1038	
	18	Pinch roller arm (A) assembly	RXB - 877	68	Earth spring	RBL - 059	
	19	BT spring (A)	RBL - 031	69	Washer	RBF - 076	
	20	BT spring (B)	RBL - 032	70	Washer	RBF1040	
	21	Idler pressure spring	RBL - 033	71	Binder	REC - 371	
	22	Reel shaft cap (B)	RNK - 815	72	Steel ball (3mm)	REF - 022	
	23	BT disk assembly	RXB - 751	73	Steel ball (4mm)	REF - 023	
	24	Reel base assembly	RXB - 874	74	Screw	VCT30P060FZK	
	25	Take - up idler assembly	RXB - 875	75	LED (D3)	SLF - 401C	
	26	Washer	RBF - 065	76	Washer	WA21D040D013	
	27	Head base spring	RBL - 037	77	Washer	WA26N070W040	
	28	Brake spring	RBL - 038	78	Washer	WA32D080D050	
	29	Drive belt	REB1182	79	E ring	YE20FUC	
	30	Brake shoe	REB - 511	80	E ring	YE25FUC	
	31	Brake	RNL - 723	81	E ring	YE30FUC	
	32	Cam gear	RNK1640	82	Snap ring	YS24FHT	
	33	Side cam gear	RNK1765	83	Shift saft assembly	RXB - 885	
	34	Insulator spring	RBH1226	84	Head base assembly	REA1020	
	35	Eject spring	RBL - 039	85	Mechanism chassis assembly	RXA1366	
	36	Half set arm spring	RBL - 040	86	Brake lever	RNK1638	
	37	REC functioning spring	RBL - 041	87	Second pulley assembly	RXA1350	
	38	Detection functioning spring	RBL - 042	88	Door frame (L)	RNE1475	
	39	Reel motor mounting plate	RNE1604	89	Finch lever assembly	RXA1360	
	40	Flywheel holder	RNH - 304	90	Door flame (R)	RNE1476	
	41	Cord clamper	RNH - 184	91	Damper assembly	VXA1153	
	42	Motor bracket	RNK1497	92	Half pressure spring	RBK1004	
	43	REC detector arm	RNL - 733	93	Door pocket	RNK1865	
	44	Chrom detector arm	RNL - 734	94	Loading motor	VXM1034	
	45	Metal detector arm	RNL - 735	95	Screw	PBZ20P060FMC	
	46	Thrust holder	RNL - 743	96	Screw	BBZ20P060FMC	
	47	Motor pulley	PNW1634	97	Stabilizer	REB1161	
	48	Pressure arm (R)	RNL - 725	98	Washer	RBF - 057	
	49	Collar	RNL - 742	99	Tape (B)	REH1003	
	50	Pressure arm (L)	RNL - 726	100	Connector assembly (2P)	RKP1553	

Mark	No.	Description	Part No.
NSP	101	Gear base assembly	RXB - 882
NSP	102	E head	RPB1046
NSP	103	R & P head	RPB1049
NSP	104	Connector unit	RWZ2459
NSP	105	Adjustment nut	RBA1047
NSP	106	Head adjustment spring	RBL - 034
NSP	107	Hight spring	RBL - 036
NSP	108	Head base	RNG - 334
NSP	109	Sub-head base	RNG - 335
NSP	110	E head base	RNG1033
NSP	111	Earth lead assembly	RDF - 001
NSP	112	REC switch unit	RWZ2457
NSP	113	Tape selector unit	RWZ2458
NSP	114	Sensor unit (B)	RWZ2460
NSP	115	Cassette plate	RAH1306
NSP	116	Lead wire holder	RNL - 793
NSP	117	Shif roller	RNL - 731
NSP	118	Connector assembly (4P)	RKP1559
NSP	119	Connector assembly (4P)	RKP1517

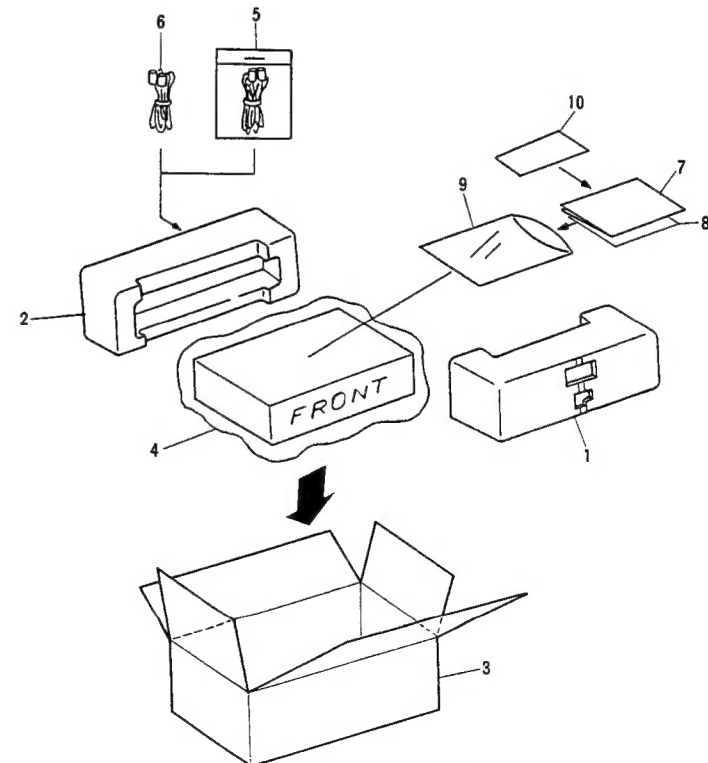
2. PACKING AND PARTS LIST

NOTES:

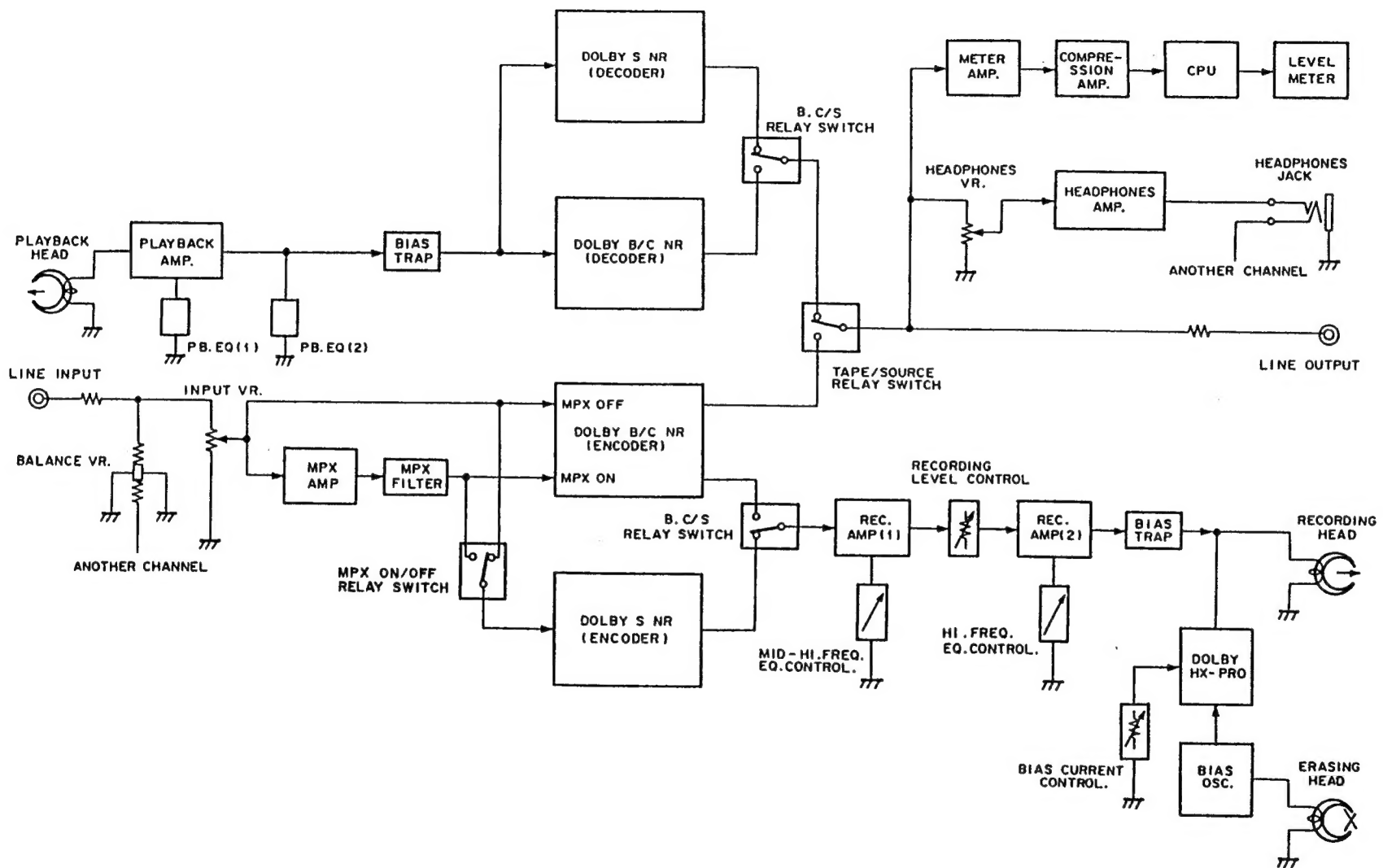
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

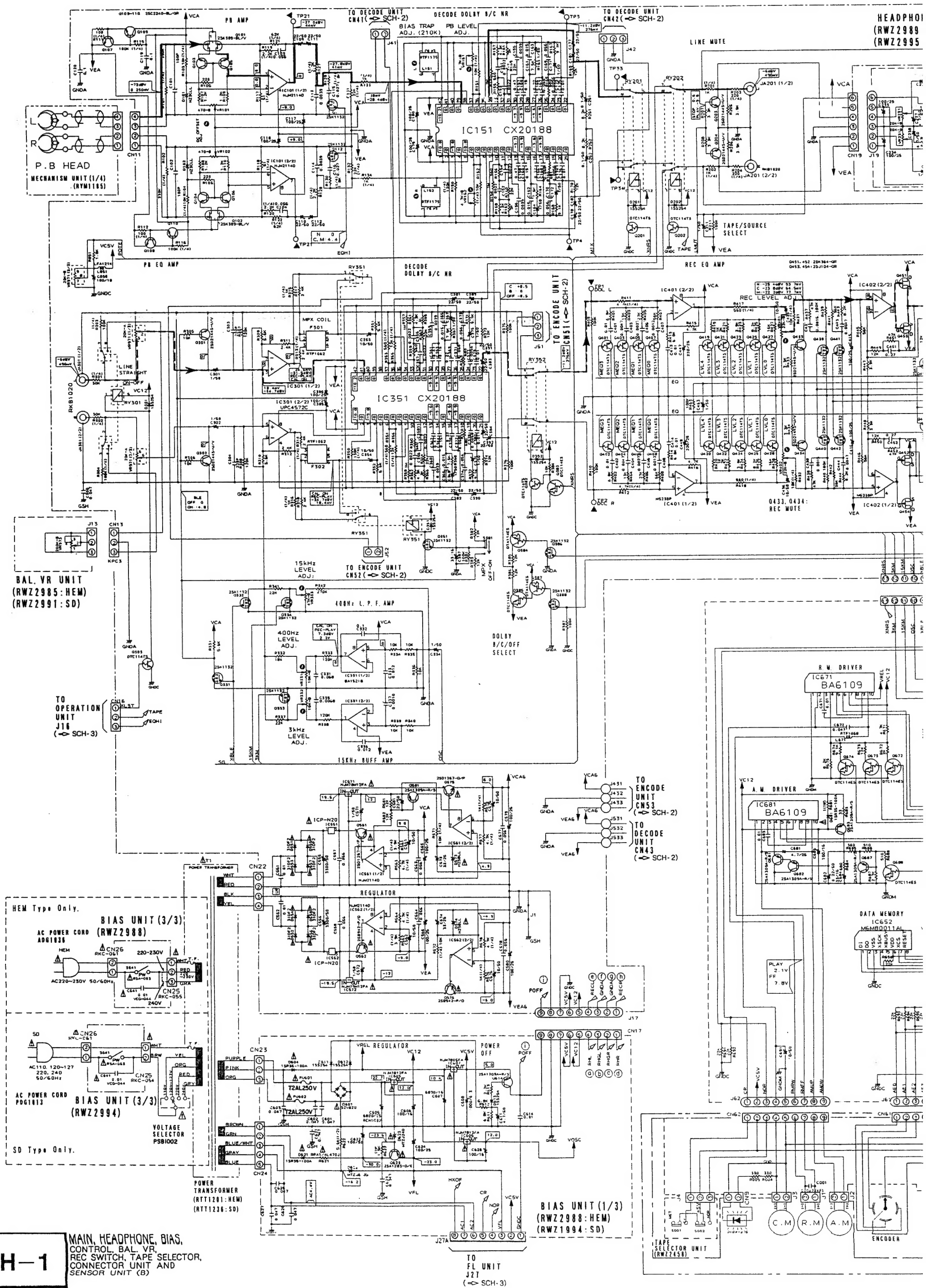
Mark	No.	Description	Part No.
	1	Pad (F)	RHA1073
	2	Pad (R)	RHA1074
	3	Packing case	RHG1489
	4	Sheet	RHX1007
	5	Connection cord assembly	RDE1013
	6	Control cord	RDE1030
	7	Operating instructions (German/Italian/Dutch/ Swedish/Spanish/Portuguese)	RRD1138
	8	Operating instructions (English/French)	RRE1078
	9	Plastic bag	Z21 - 038
NSP	10	Warranty card	ARW - 088



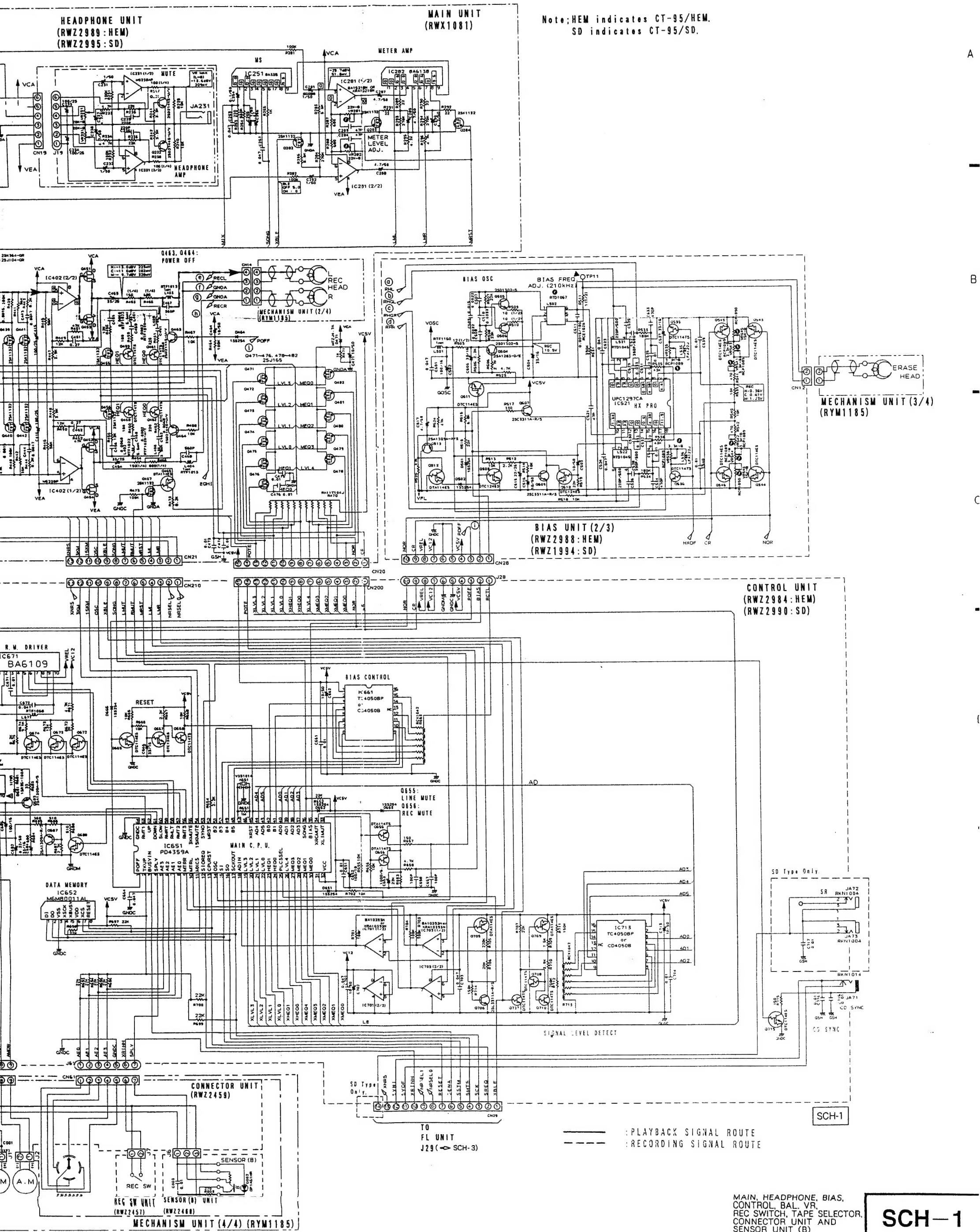
3. BLOCK DIAGRAM



1. MAIN, HEADPHONE, BIAS, CONTROL, BAL. VR, REC SWITCH, TAPE SELECTOR, CONNECTOR UNIT AND SENSOR UNIT (B)

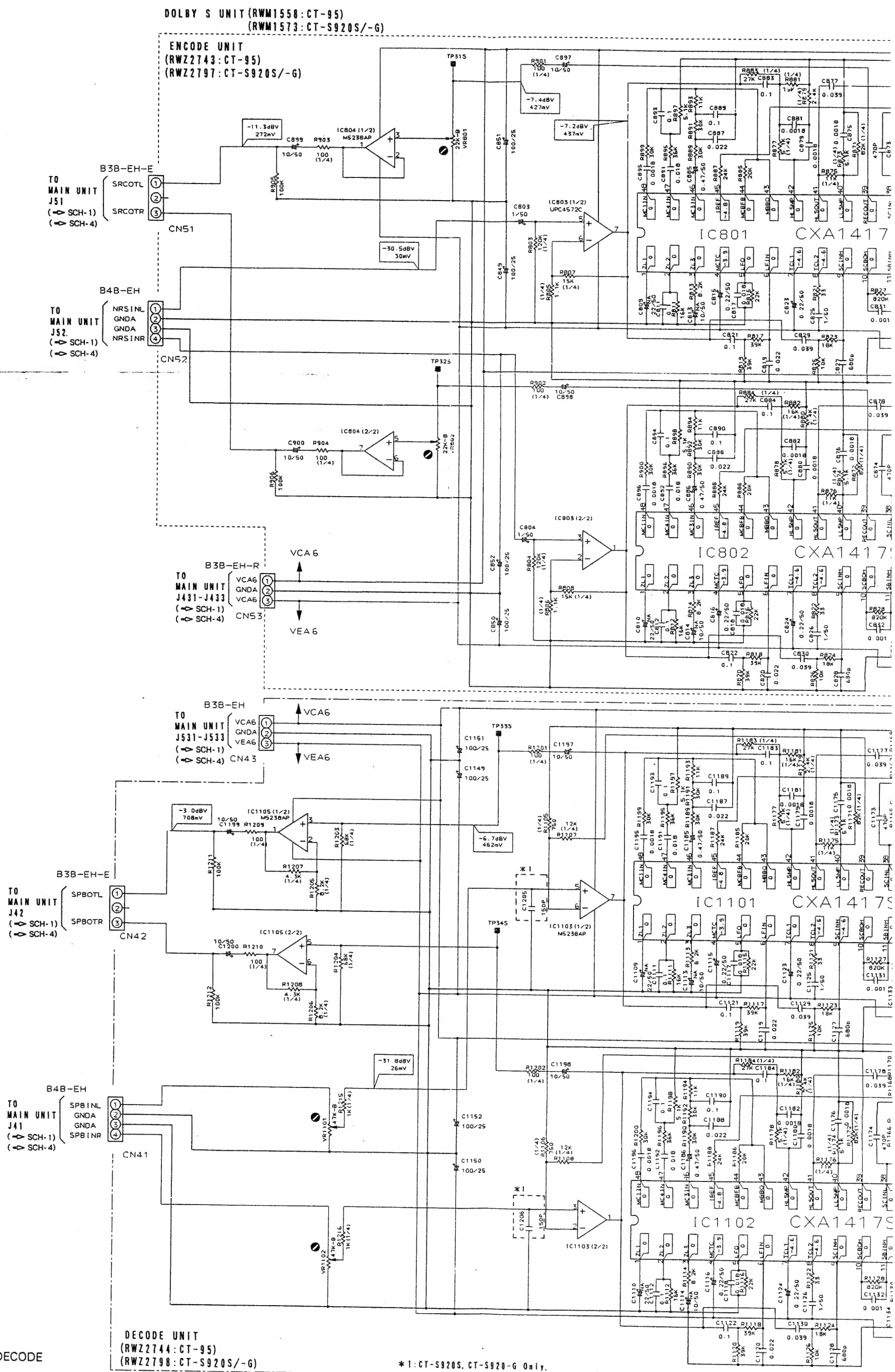


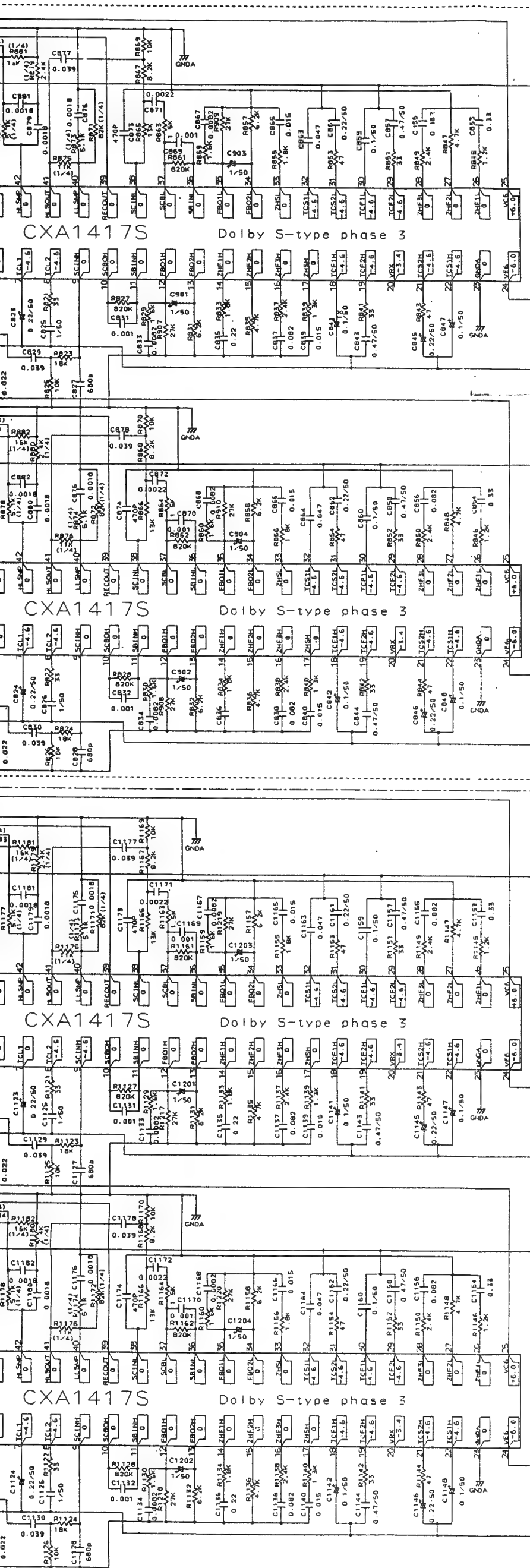
UNIT (B)



SCH-1

2. ENCODE AND DECODE UNIT





Note: CT-95 indicates CT-95/HEM and CT-95/SD.
CT-S920S/-G indicates CT-S920S/HEM and
CT-S920S-G/HEM.

- Note: (Type 6)
- When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
 - Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
 - RESISTORS:**
Unit: k: k Ω , M: M Ω , or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.
 - CAPACITORS:**
Unit: p: pF or μ F unless otherwise noted.
Ratings: capacitor (μ F)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.
 - COILS:**
Unit: m: mH or μ H unless otherwise noted.
 - VOLTAGE AND CURRENT:**
□ : DC voltage (V) in STOP mode unless otherwise noted.
↺ mA or -mA : DC current in STOP mode unless otherwise noted.
 - OTHERS:**
 - : Signal route.
 - ⊙ : Adjusting point.
 - ▼ (Red) : Measurement point.
 - The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
 - SWITCHES** (Underline indicates switch position):

BIAS UNIT
S641 : POWER

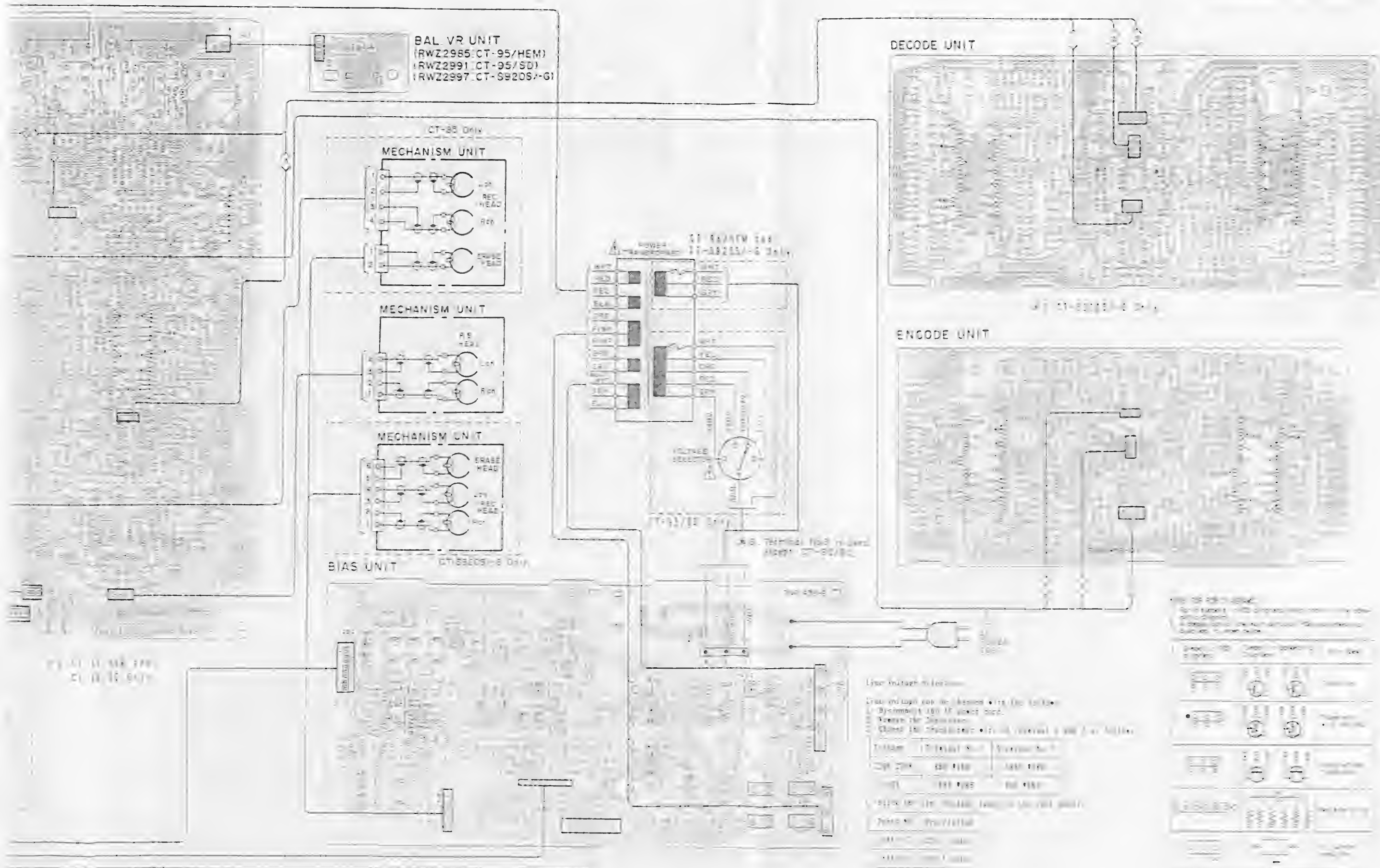
FL UNIT
S721 : BLE (FLT) S/C
S722 : METER RANGE
S723 : RESET
S724 : BIAS DOWN
S725 : PEAK MODE
S726 : COUNTER MODE
S727 : BIAS UP
S728 : TAPE RETURN
S729 : DISPLAY OFF
S735 : PLAY - OFF - REC

OPERATION UNIT
S781 : LINE STRAIGHT
S782 : DOLBY - NR SELECT
S783 : HX PRO
S784 : MONITOR
S785 : REC/MUTE
S786 : PAUSE
S787 : REC
S788 : OPEN/CLOSE
S789 : FF
S790 : PLAY
S791 : REW
S792 : STOP
S793 : CD CYN
 - For SCH - □ on the schematic diagram.
 - SCH - □ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

SCH-2

ENCODE, DECODE
UNIT

SCH-2



Line Voltage Selection

Grounding can be selected with the switch.
In D-coupling, use 100V AC power line.
Select the appropriate line voltage.
Closed (100V) position: 100V AC power line.

Line Voltage	100V	120V	240V
100V	100V	120V	240V
120V	100V	120V	240V
240V	100V	120V	240V

* Refer to the manual for the correct wiring.

Model: RWZ2985

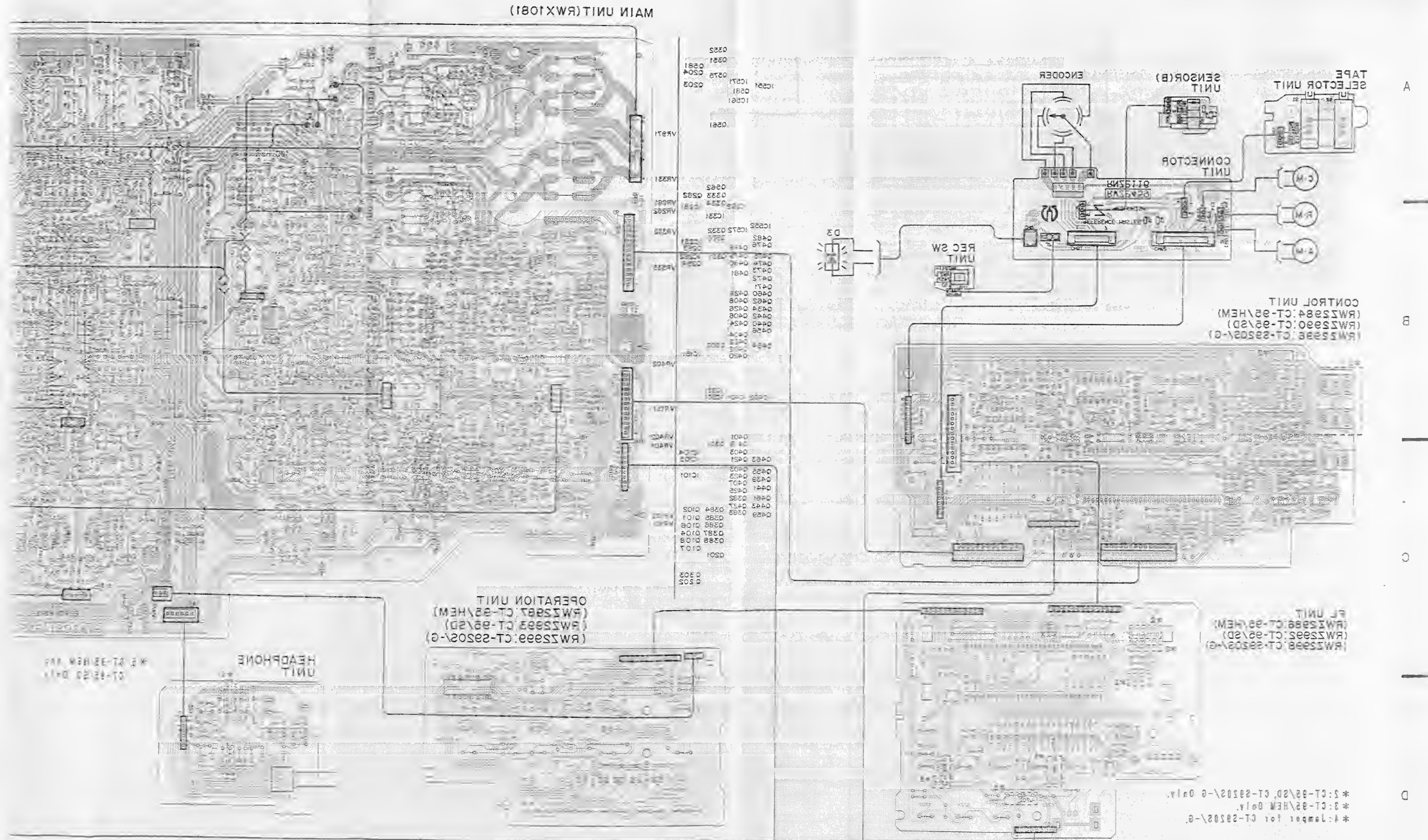
Model: RWZ2991

Model: RWZ2997





- This diagram is viewed from the foil side

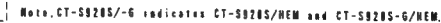


SCH-3

FL, OPERATION
UNIT

SCH-3

26



5. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "O" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω \rightarrow $56 \times 10^1 \rightarrow 561$ RD1/8PM $\begin{bmatrix} 5 & 6 & 1 \end{bmatrix}$ J

47k Ω \rightarrow $47 \times 10^3 \rightarrow 473$ RD1/4PS $\begin{bmatrix} 4 & 7 & 3 \end{bmatrix}$ J

0.5 Ω \rightarrow OR5 RN2H $\begin{bmatrix} 0 & 5 \end{bmatrix}$ K

1 Ω \rightarrow O10 RS1P $\begin{bmatrix} 0 & 1 & 0 \end{bmatrix}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω \rightarrow $562 \times 10^1 \rightarrow 5621$ RNI/4PC $\begin{bmatrix} 5 & 6 & 2 & 1 \end{bmatrix}$ F

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
------	-----	-------------	----------	------	-----	-------------	----------

LIST OF ASSEMBLIES

	MAIN UNIT	RWX1081
NSP	SUB UNIT	RWM1629
	CONTROL UNIT	RWZ2984
	BAL. VR UNIT	RWZ2985
	FL UNIT	RWZ2986
	OPERATION UNIT	RWZ2987
NSP	BIAS UNIT	RWZ2988
NSP	HEADPHONE UNIT	RWZ2989
	DOLBY S UNIT	RWM1558
NSP	ENCODE UNIT	RWZ2743
NSP	DECODE UNIT	RWZ2744
	RELAY UNIT	RWM1454
NSP	REC SWITCH UNIT	RWZ2457
NSP	TAPE SELECTOR UNIT	RWZ2458
NSP	CONNECTOR UNIT	RWZ2459
NSP	SENSOR UNIT (B)	RWZ2460

MAIN UNIT

SEMICONDUCTORS

	IC331	BA15218
	IC281	BA15218N
	IC251	BA335
	IC282	BA6138
	IC151, IC351	CX20188
Δ	IC551, IC552	ICP-N20
	IC401, IC402	MS238P
	IC101, IC561, IC562	NJM2114D
Δ	IC571	NJM78M12FA
Δ	IC572	NJM79M12FA
	IC301	UPC4572C
	Q581	2SA1309A
Δ	Q562, Q576	2SB942
	Q103-Q110	2SC2240
Δ	Q561, Q575	2SD1267
	Q203, Q204, Q301, Q302, Q433, Q434, Q463, Q464	2SD2144S

	Q453, Q454	2SJ104
	Q471-Q476, Q478-Q482	2SJ165
	Q111, Q112, Q282-Q284, Q331-Q334, Q351, Q386, Q388, Q439-Q442, Q455, Q456, Q467	2SK1132
	Q451, Q452	2SK364
	Q101, Q102	2SK389
	Q384, Q387, Q465	DTA114ES
	Q383, Q385	DTC114ES
	Q201, Q202, Q303, Q382, Q401-Q408, Q419-Q428, Q459-Q462	DTC114TS
	D201, D202, D301, D351, D352	1SS254
Δ	D464	1SS254
Δ	D551-D558	31DF2-FC5
Δ	D101, D102	HZ3CLL
Δ	D573, D574	HZ5BL
	D471	MTZJ4.7A

SWITCHES

S381	RSH1040
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RELAYS

RY201, RY202, RY301, RY351, RY352	RSR1016
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COILS

L851	LFA121K
L403, L404 (L=1mH (252KHz), Q=40)	RTF1013
L405, L406 (L=3.9mH (252KHz), Q=30)	RTF1020
L401, L402 (L=5.6mH (252KHz), Q=30)	RTF1022
L151, L152	RTF1175
F301, F302	RTF1062

CAPACITORS

C283, C284	CCPUSL470J50
C211, C281, C282, C334, C463	CEAS010M50
C464, C471	CEAS100M50
C855	CEAS101M10
C581	CEAS220M50
C387	CEAS330M16
C287-C290	CEAS47M50
C251, C252, C254, C255	CEASR10M50
C256	CEASR47M50

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
C119, C120			CFTXA104J50	R453, R454 (150Ω)		RDR1/4PM151J	
C407, C408			CFTXA122J50	R129, R130 (1.8K)		RDR1/4PM182J	
C437, C438			CFTXA152J50	R203, R204 (220Ω)		RDR1/4PM221J	
C151-C154, C355-C358			CFTXA222J50	R119, R120, R127, R128 (2.2K)		RDR1/4PM222J	
C405, C406			CFTXA272J50	R131, R132 (22K)		RDR1/4PM223J	
C113, C114, C155, C156, C359, C360			CFTXA392J50	R313, R314 (2.4K)		RDR1/4PM242J	
C403, C404, C443, C444			CFTXA472J50	R301, R302 (30K)		RDR1/4PM303J	
C173, C174, C377, C378			CFTXA562J50	R101, R102 (330K)		RDR1/4PM334J	
C335, C455, C456, C461, C462			CFTXA682J50	R561, R562 (3.9K)		RDR1/4PM392J	
C459, C460			CFTXA822J50	R411, R412, R563, R564, R577, R578 (4.7K)		RDR1/4PM472J	
C175, C176, C379, C380, C401, C402, C413, C414			CFTYA103J50	R117, R118 (51Ω)		RDR1/4PM510J	
C161, C162, C365, C366			CFTYA153J50	R353, R354, R417, R418 (560Ω)		RDR1/4PM561J	
C159, C160, C363, C364			CFTYA154J50	R121, R122 (62K)		RDR1/4PM623J	
C165, C166, C369, C370			CFTYA224J50	R465, R466 (680Ω)		RDR1/4PM681J	
C115, C116			CFTYA273J50	VR151, VR152 (4.7K)		RCP1080	
C451, C452			CFTYA274J50	VR331, VR332 (10K)		RCP1045	
C253, C257			CFTYA473J50	VR281, VR282, VR401, VR402 (22K)		RCP1046	
C157, C158, C361, C362			CFTYA474J50	VR333 (47K)		RCP1047	
C103, C104, C169, C170, C373, C374, C557, C558, C563, C564, C577, C578			CFTYA563J50	VR101, VR102 (470Ω)		RCP1109	
C167, C168, C331, C371, C372			CFTYA683J50	VR971 (20KA)		RCV1019	
C551, C552			CKCYF103Z50	OTHER RESISTORS		RD1/6PM□□□J	
C300			CKCYF473Z50	OTHERS		RKB1020	
C473-C476			CKPUY108N16	JA201, JA301 PIN JACK (2P)		RKP1434	
C332			QMA104J50	J41, J52 CONNECTOR ASSY (4P)		TXC-P13P-A1	
C333, C336			QMA123J50	CN21 CONNECTOR		TXC-P15P-A1	
C337			QMA182J50	CN20 CONNECTOR		RKC-Q56	
C303, C304			QSA221J50	TERMINAL		1B230P100FCC	
C467, C468			QSA561J50	SCREW			
C101, C102			QSPF101J50	ENCODE UNIT			
C117, C118, C179, C180, C385, C386, C415, C416 (C=101, V(DC)=25)			PCH1078	SEMICONDUCTORS		CXA1417S-P	
C447, C448 (C=221, V(DC)=25)			PCH1077	IC801, IC802		M5238AP	
C565, C566, C579, C580			PCH1084	IC804		UPC4572C	
(C=101, V(AC)=25)				IC803			
C555 (C=3300UF, VDC=50, A=20)				CAPACITORS			
C566 (C=3300UF, VDC=50, A=20)				C841, C842, C847, C848		CEASR10M50	
C163, C164, C171, C172, C301, C302, C367, C368, C375, C376, C571, C572 (C=1, V(DC)=50)				C815, C816, C823, C824, C845, C846		CEASR22M50	
C353, C354, C435, C436, C561, C562, C575, C576 (C=10, V(DC)=50)				C885, C886		CEASR47M50	
C109-C112, C177, C178, C181, C182, C381-C384, C389-C392 (C=22, V(DC)=50)				C813, C814		CENAI100M50	
C453, C454, C573, C574 (C=33, V(DC)=25)				C809, C810		CENAI220M50	
RESISTORS				C831, C832, C869, C870		CFTXA102J50	
R470 (100K)			RA11T104J	C875, C876, C879-C882, C895, C896		CFTXA182J50	
R409, R410 (100K)			RCN1043	C871, C872		CFTXA222J50	
R111, R112 (100Ω)			RDR1/4PM101J	C873, C874		CFTXA471J50	
R133, R134, R201, R202, R315, R316, R575, R576 (1K)			RDR1/4PM102J	C827, C828		CFTXA681J50	
R151, R152, R431, R432, R571, R572 (10K)			RDR1/4PM103J	C833, C834, C867, C868		CFTXA822J50	
R115, R116, R303, R304 (100K)			RDR1/4PM104J	C811, C812, C821, C822, C859, C860, C883, C884, C889, C890, C893, C894		CFTYA104J50	
R355, R356 (12K)			RDR1/4PM123J	C825, C826		CFTYA105J50	
R150, R350 (130K)			RDR1/4PM134J	C839, C840, C865, C866		CFTYA153J50	
				C817, C818, C891, C892		CFTYA183J50	
				C819, C820, C887, C888		CFTYA223J50	
				C835, C836, C861, C862		CFTYA224J50	
				C853, C854		CFTYA334J50	
				C829, C830, C877, C878		CFTYA393J50	
				C863, C864		CFTYA473J50	

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
		C843, C844, C857, C858	CFTYA474J50			R1175, R1176 (11K)	RDR1/4PM113J
		C837, C838, C855, C856	CFTYA823J50			R1107, R1108 (12K)	RDR1/4PM123J
		C849-C852 (C=100, V(DC)=25)	RCH1057			R1181, R1182 (16K)	RDR1/4PM163J
		C803, C804, C901-C904 (C=1, V(DC)=50)	RCH1079			R1179, R1180 (2.4K)	RDR1/4PM242J
		C897-C900 (C=10, V(DC)=50)	RCH1080			R1183, R1184 (27K)	RDR1/4PM273J
RESISTORS						R1207, R1208 (4.3K)	RDR1/4PM432J
R901-R904 (100Ω)			RDR1/4PM101J			R1173, R1174, R1177, R1178 (5.1K)	RDR1/4PM512J
R805, R806 (1.1K)			RDR1/4PM112J			R1203, R1204 (68K)	RDR1/4PM683J
R875, R876 (11K)			RDR1/4PM113J			R1105, R1106 (750Ω)	RDR1/4PM751J
R803, R804 (120K)			RDR1/4PM124J			R1205, R1206 (8.2K)	RDR1/4PM822J
R807, R808 (15K)			RDR1/4PM153J			R1171, R1172 (82K)	RDR1/4PM823J
R881, R882 (16K)			RDR1/4PM163J			VR1101, VR1102 (47K)	RCP1104
R879, R880 (2.4K)			RDR1/4PM242J			OTHER RESISTORS	RD1/6PM□□□J
R883, R884 (27K)			RDR1/4PM273J	CONTROL UNIT			
R873, R874, R877, R878 (5.1K)			RDR1/4PM512J	SEMICONDUCTORS			
R871, R872 (82K)			RDR1/4PM823J	IC701, IC703		BA10393N	
VR801, VR802 (22K)			RCP1103	IC671, IC681		BA6109	
OTHER RESISTORS			RD1/6PM□□□J	IC652		M6M80011AL	
DECODE UNIT				IC651		PD4359A	
SEMICONDUCTORS				IC661, IC713		TC4050BP	
IC1101, IC1102			CXA1417S-P	Q681-Q683, Q687		2SA1309A	
IC1105			M5238AP	Q706		2SC3911A	
IC1103			M5238P	Q705, Q709		DTA114ES	
CAPACITORS				Q655, Q656		DTA114TS	
C1141, C1142, C1147, C1148			CEASR10M50	Q665, Q672-Q674, Q688, Q715		DTA114ES	
C1115, C1116, C1123, C1124, C1145, C1146			CEASR22M50	Q668, Q707, Q708, Q710		DTA114TS	
C1185, C1186			CEASR47M50	Q667		DTA124ES	
C1113, C1114			CENAI100M50	D681		1SR35-100A	
C1109, C1110			CENAI220M50	D651-D653, D665		1SS254	
C1131, C1132, C1169, C1170			CFTXA102J50	COILS			
C1175, C1176, C1179-C1182, C1195, C1196			CFTXA182J50	L671 (L=0.15mH, Q=30)		RTF1068	
C1171, C1172			CFTXA222J50	CAPACITORS			
C1173, C1174			CFTXA471J50	C681		CEANP4R7M25	
C1127, C1128			CFTXA681J50	C662, C691, C702, C713		CEAS100M50	
C1133, C1134, C1167, C1168			CFTXA822J50	C652		CEAS101M10	
C1111, C1112, C1121, C1122, C1159, C1160, C1183, C1184, C1189, C1190, C1193, C1194			CFTYA104J50	C685		CEAS101M16	
C1125, C1126				C653		CEAS102M6R3	
C1139, C1140, C1165, C1166			CFTYA105J50	C666, C684		CEAS330M16	
C1117, C1118, C1191, C1192			CFTYA153J50	C682		CEASR22M50	
C1119, C1120, C1187, C1188			CFTYA183J50	C651, C661, C671, C683, C714-C716		CKCYF103Z50	
C1135, C1136, C1161, C1162				C672, C701, C703		CKCYF473Z50	
C1153, C1154				C657, C658		CKPUY101K50	
C1129, C1130, C1177, C1178				RESISTORS			
C1163, C1164				R663, R713 (10K/20K)		RCX1042	
C1143, C1144, C1157, C1158			CFTYA474J50	R711		RN1/6PQ1503F	
C1137, C1138, C1155, C1156			CFTYA823J50	R706		RN1/6PQ2002F	
C1149-C1152 (C=100, V(DC)=25)			RCH1057	R712		RN1/6PQ2003F	
C1201-C1204 (C=1, V(DC)=50)			RCH1079	R705		RN1/6PQ2203F	
C1197-C1200 (C=10, V(DC)=50)			RCH1080	R710		RN1/6PQ3901F	
RESISTORS				R709		RN1/6PQ7501F	
R1201, R1202, R1209, R1210 (100Ω)			RDR1/4PM101J	R681 (1Ω)		RS1LMF010J	
R1215, R1216 (1K)			RDR1/4PM102J	OTHER RESISTORS		RD1/6PM□□□J	
OTHERS				JA71 MINI JACK		RKN1014	
CN210 CONNECTOR				CN210 CONNECTOR		TXC-P13X-A1	

Mark	No.	Description	Part No.
		CN200 CONNECTOR X651 CERAMIC RESONATOR (4.19MHz)	TXC-PI5X-A1 YSS1014
BAL.VR UNIT			
RESISTORS		VR973 (200K Ω)	RCV1078
FL UNIT			
SEMICONDUCTORS		IC721 D724-D729, D750-D752	PD3198A ISS254
SWITCHES		S721-S729 S735	RSG1030 RSH1011
COILS		L701-L703	PTH1008
CAPACITORS		C722 C721, C723	CEAS100M50 CKCYF103Z50
RESISTORS		ALL RESISTORS	RD1/6PM□□□J
OTHERS		V721 FL INDICATOR TUBE X721 CERAMIC RESONATOR (4.19MHz)	RAW1096 YSS1014
OPERATION UNIT			
SEMICONDUCTORS		IC781 D781 D786-D788 D783 D782, D784, D785, D789	BU2040 SEL6410G SEL6910A SEL6910D SEL6C10R
SWITCHES		S781-S793	RSG1030
CAPACITORS		C782 C781 C790, C791 C792	CEJA100M16 CKCYF103Z50 CKPUYB101K50 CKPUYU103N16
RESISTORS		ALL RESISTORS	RD1/6PM□□□J
BIAS UNIT			
SEMICONDUCTORS		IC607 IC605, IC606 IC521 Q504 Q623	NJM7805FA NJM7812FA UPC1297CA 2SA1283 2SA1283
		Q513, Q614 Q507, Q509 Q505, Q506 Q512 Q511, Q543-Q546	2SA1309A 2SC3311A 2SD1302 DTA114ES DTC114ES

Mark	No.	Description	Part No.
		Q535, Q536 Q508, Q510 D604, D621 D501, D502, D611-D613 D623	DTC114TS DTC124ES 1SR35-100A 1SS254 MTZJ24D
		D622 D601	MTZJ6.8B SZVB20
SWITCHES			
		S641	RSA-063
COILS			
		L535, L536 L521, L522 (F=210KHz) L502 L501 (1mH)	LFA122J RTD1045 RTD1067 RTF1160
CAPACITORS			
		C521 C525, C526 C503, C516 C502, C606, C626 C624	CCCC470J50 CCCSL221K500 CEAS100M50 CEAS101M16 CEAS101M25
		C622 C608 C515 C504, C505, C537 C517, C611	CEAS101M50 CEAS102M6R3 CEAS220M25 CEAS330M16 CEAS4R7M50
		C607 C535, C536 C509 C507, C508 C531, C532	CEAS682M16 CFTXA103J50 CFTXA153J50 CFTXA222J50 CFTXA223J50
		C510 C529, C530 C539, C540, C614 C501, C523, C524, C601-C603, C621, C623, C625, C627, C628 C533, C534	CFTXA332J50 CFTXA333J50 CKCYF103Z50 CKCYF473Z50
		C511 (C=1500PF, A=J, VDC=100) C527, C528 (C=390P, V(DC)=500) C605 (C=6800UF, VDC=25, A=20) C641	RCE1026 RCG1004 RCH1032 VCG-044
RESISTORS			
		R511 R503 R509, R510 R622 R621 (47 Ω)	RD1/ZLF010J RD1/ZLF120J RD1/ZPMF100J RD1/ZPMF562J RFA1/4L470J
		R516 R515 R623 (1.5K) YR545, YR546 (15K) OTHER RESISTORS	RN1/6PQ2202F RN1/6PQ6801F RS1LMF152J RCP1090 RD1/6PM□□□J
OTHERS			
		TERMINAL	RKC-061

Mark	No.	Description	Part No.
HEADPHONE UNIT			
SEMICONDUCTORS			
		IC231 Q231, Q232	NS238AP 2SD2144S
CAPACITORS			
		C231, C232 C237, C238 C235, C236 C233, C234 (C=101, V(DC)=25)	CEYA010M50 CEYA4R7M50 CKPUYB221K50 PCH1076
RESISTORS			
		R237, R238 (100 Ω) VR231 (20KB) OTHER RESISTORS	RDR1/4PM101J PCS1002 RD1/6PM□□□J
OTHERS			
		JA231 HEADPHONE JACK	RKN1002
REC SWITCH UNIT			
SWITCHES			
		S3	RSG-143
TAPE SELECTOR UNIT			
SWITCHES			
		S1, 2	RSH-070
CONNECTOR UNIT			
CAPACITORS			
		C1	CKCYF473Z50
RESISTORS			
		ALL RESISTORS	RD1/6PM□□□J
OTHERS			
		CN61 CONNECTOR (7P) CN62 CONNECTOR (9P)	SBRK07S SBRK09S
SENSOR UNIT (B)			
SEMICONDUCTORS			
		D2	GPIA51HR
CAPACITORS			
		C3	CKPUYU103N16
RESISTORS			
		ALL RESISTORS	RD1/6PM□□□J

6. ADJUSTMENTS

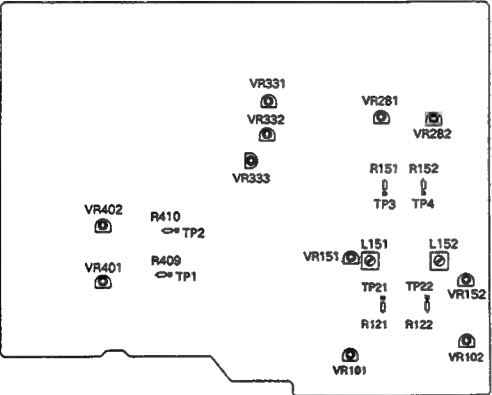
6.1 MECHANICAL ADJUSTMENT

1. Tape speed Adjustment

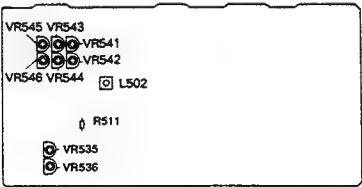
Mode	Test tape	Adjustment position	Specification rating (playback frequency)
PLAY	Play the STD-301 tape (3kHz)	Tape speed adjustment hole	3015Hz ± 5Hz

Fig. 6-1 Tape speed adjustment

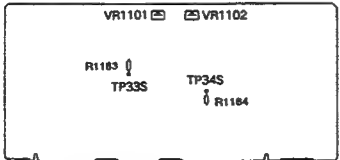
MAIN UNIT



BIAS UNIT



DECODE UNIT



ENCODE UNIT

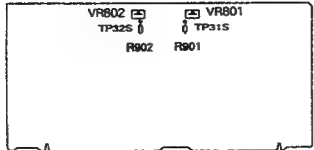


Fig. 6-2 Adjusting points

6.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

- 1. The mechanical adjustments must be completed first.
- 2. The head must be cleaned and demagnetized.
- 3. Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
- 4. The reference signal is 0 dBV=1 Vrms.
- 5. Connect a 50 kΩ (or between 47k to 52 kΩ) load resistance to the OUTPUT terminals.
- 6. Unless otherwise specified, the switches listed below are left in the positions indicated.
DOLBY NR : OFF
TAPE SELECTOR : NORM

Test Tapes

- STD-331E : Playback adjustments (See Fig. 6-3)
- STD-631 : NORMAL blank tape
- STD-621 : CrO₂ blank tape
- STD-610 : METAL blank tape

* As the reference recording level is 250 nwb/m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160 nwb/m). When adjusting, pay carefull attention to the type of tape used.

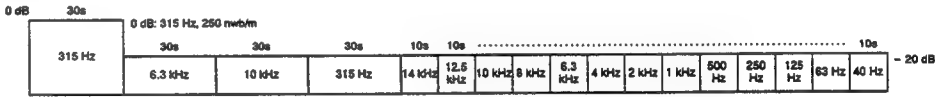


Fig. 6-3 Constants of the test tape STD-331E

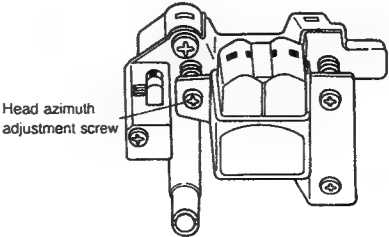


Fig. 6-4 Head azimuth adjustment

List of Adjustments

Playback sections

- 1. Head azimuth adjustment.
- 2. Playback level adjustment.
- 3. DC balance adjustment.

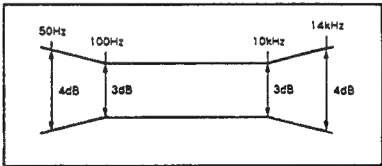
Recording sections

- 1. Bias oscillator adjustment.
- 2. Bias trap adjustment.
- 3. DOLBY-S encoder adjustment.
- 4. Recording bias adjustment.
- 5. Recording level adjustment.
- 6. Level meter check.
- 7. AUTO BLE adjustment.

NOTE: This unit has an automatic tape selection feature.

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PLAY BACK



RECORDING

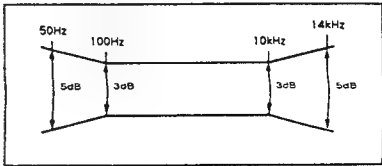


Fig. 6-5 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR151, 152 to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/-20 dB section of STD-331E test tape.	Head azimuth adjustment screw. (See Fig. 6-4)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

Note: The left and right phase difference for the 12.5 kHz tone should be within 75 degrees. (That for the 10 kHz tone should be within 60 degrees.)

2. Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	Set the DOLBY NR switch to the S position.					
2.	PLAY	Play the 315 Hz/0 dB section of the STD-331E test tape.	DOLBY S VR1101 (Lch) VR1102 (Rch)	TP. 33S (Lch) TP. 34S (Lch)	-8.5 dBV	
3.	Set the DOLBY NR switch to the OFF position.					
4.	PLAY	Play the 315 Hz/0 dB section of the STD-331E test tape.	Deck VR151 (Lch) VR152 (Rch)	TP. 3 (Lch) TP. 4 (Lch)	-11.0 dBV	

3. DC Balance Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	-	-	VR101 (Lch) VR102 (Rch)	TP. 21 (Lch) TP. 22 (Rch)	0V \pm 0.2V	

RECORDING SECTION

1. Bias Oscillator Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Load the STD-610 test tape with no input signal.	Deck L502	TP. 11	210kHz \pm 800 Hz	

2. Bias Tap Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Load the STD-610 test tape with no input signal.	Deck L151 (Lch) L152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Minimum output	

3. DOLBY-S Encoder Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	Set the DOLBY NR switch to the OFF position.					
2.	REC/ PAUSE	Apply a 315 Hz/-10 dBV signal to the line input terminals.	REC level control volume	TP. 1 (Lch) TP. 2 (Rch)	-15.2 dBV	
3.	Set the DOLBY NR Switch to the S position.					
4.	REC/ PAUSE	Apply a 315 Hz/-10 dBV signal to the line input terminals.	VR801 (Lch) VR802 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	-14.5 dBV	

4. Recording Bias Adjustment

- After the adjustment, Caution should be exercised so as not to become under bias by checking the distortion rate.
- Set the DOLBY NR switch to the OFF position and DOLBY HX PRO switch to the ON position.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Record the 315 Hz and 10kHz signals at - 28 dBV input level onto the STD - 631 test tape, and Playback.	NOR.	VR541 (Lch) VR542 (Rch)	LINE OUT	Repeatedly record, playback and adjust so that the playback level of 10 kHz signal becomes 0 dB \pm 0.5dB when compared with the 315Hz signal.	
2.		Record the above signal onto the STD-621 test tape, and playback.	CrO2	VR543 (Lch) VR544 (Rch)		0 dB \pm 0.5 dB	
3.		Record the above signal onto the STD-610 test tape, and playback.	MET.	VR545 (Lch) VR546 (Rch)		0 dB \pm 0.5 dB	
4. Set the DOLBY HX PRO switch to the OFF position.							
5.	REC → PLAY	Record and playback the 315 Hz signal and a 10kHz signal at -28 dBV input level.	NOR	VR535 (Lch) VR536 (Rch)	LINE OUT	Turn the control fully counterclockwise, and gradually turn to the right to adjust to 0 dB \pm 0.5 dB compared when HX-Pro is ON.	Turn control clockwise past the peak to assure proper overbias value.
6. Set the DOLBY NR switch to the S position.							
7.		Record the 315 Hz and 10kHz signals at - 28 dBV input level onto the STD - 631 test tape, and Playback.	NOR.	VR541 (Lch) VR542 (Rch)	LINE OUT	Repeatedly record, playback and adjust so that the playback level of 10 kHz signal becomes 0 dB \pm 1.0dB when compared with the 315Hz signal.	
8.		Record the above signal onto the STD-621 test tape, and playback.	CrO2	VR543 (Lch) VR544 (Rch)		0 dB \pm 1.0 dB	
9.		Record the above signal onto the STD-610 test tape, and playback.	MET.	VR545 (Lch) VR546 (Rch)		0 dB \pm 1.0 dB	

Note : Adjust in the order of NOR → CrO2 → METAL. After completing all adjustments, note that the adjustment values for CrO2 and METAL will be altered if NOR is re-adjusted, and that for METAL will be altered if CrO2 is re-adjusted.

5. Recording Level Adjustment

- Set the DOLBY NR switch to the OFF position.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/ - 4 dBV signal to the line input terminals, load the STD-631 test tape.	REC level control volume		TP. 3 (Lch) TP. 4 (Rch)	-15.2 dBV	
2.	REC/ PLAY	Record the above signal onto the STD - 631 test tape, and playback.	Deck	VR401 (Lch) VR402 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes -15.2 dB.	
3.	REC/ PLAY	Record the above signal onto the STD - 621 test tape, and playback.	Check			-15.2 dBV \pm 1 dB	
4.	REC/ PLAY	Record the above signal onto the STD - 610 test tape, and playback.	Check			-15.2 dBV \pm 1 dB	
5.	STOP	Set the DOLBY NR switch to the S position.					
6.	REC/ PLAY	Record the above signal onto the STD - 631 test tape, and playback.	Check	LINE OUT		0 dB \pm 0.5 dB for paragraph 2. (* 1)	

* 1: If this confirmation value cannot be obtained, perform "Playback Level Adjustment" and "DOLBY - S Encoder Adjustment" once again.

6. Level Meter Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/−8 dBV (501 mV) signal to the line input terminals.	VR281 (Lch) VR282 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Adjust that the level meters “0 dB” light up within −11.2 dBV ± 0.5 dB of the signal output level.	

Note: Rotate from the left to the right, and adjust so that it lights up. Be sure to adjust properly as it will serve as the reference level for BLE.

7. AUTO BLE Adjustment

- BLE Adjustment must be performed after all other adjustments are completed.
- This adjustment should be performed in the test mode.
- Entering the test mode

Press the COUNTER, METER and MONITOR (AUTO) keys on the front panel simultaneously, with the power ON. The unit enters the test mode and oscillates a 400 Hz signal.

Thereafter, each time the START/CLEAR key is pressed, the oscillation frequency changes as follows: 3 kHz oscillation → 15 kHz oscillation → 400Hz oscillation

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.		REC LEVEL VR MIN or no signal input.	-	-	-	
2.	-	Press the three keys COUNTER, METER and MONITOR (AUTO) on the front panel simultaneously.	VR331	Level meter Rch	Adjust so that 0 dB on the level meter lights.	400 Hz adjustment
3.		Press the START/CLEAR key once.	VR332		Adjust so that 0 dB on the level meter lights.	3 kHz adjustment
4.		Press the START/CLEAR key once.	VR333		Adjust so that -3 dB on the level meter lights.	15 kHz adjustment
5.	When the RESET (COUNTER) key is pressed again, the test mode is released.					

6. FOR CT-95/SD, CT-S920S/HEM AND CT-S920S-G/HEM

NOTES:

- Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by “ \odot ” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10¹ → 561 RD1/8PM $\begin{bmatrix} 5 & 6 & 1 \end{bmatrix}$ J

47k Ω → 47 × 10³ → 473 RD1/4PS $\begin{bmatrix} 4 & 7 & 3 \end{bmatrix}$ J

0.5 Ω → 0R5 RN2H $\begin{bmatrix} 0 & R & 5 \end{bmatrix}$ K

1 Ω → 010 RS1P $\begin{bmatrix} 0 & 1 & 0 \end{bmatrix}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10³ → 5621 RN1/4PC $\begin{bmatrix} 5 & 6 & 2 & 1 \end{bmatrix}$ F

CT-95/SD, CT-S920S/HEM, CT-S920S-G/HEM and CT-95/HEM have the same construction except for the following:

Mark	Symbol & Description	Part No.				Remarks
		CT-95/ HEM	CT-95/ SD	CT-S920S/ HEM	CT-S920S-G/ HEM	
	Main unit	RWX1081	RWX1081	RWX1081	RWX1081	
	Control unit	RWZ2984	RWZ2980	RWZ2986	RWZ2986	
	BAL VR unit	RWZ2985	RWZ2981	RWZ2987	RWZ2987	
	FL unit	RWZ2986	RWZ2982	RWZ2988	RWZ2988	
	Operation unit	RWZ2987	RWZ2983	RWZ2989	RWZ2989	
NSP	Bias unit	RWZ2988	RWZ2984	RWZ3000	RWZ3000	
NSP	Headphone unit	RWZ2989	RWZ2985	RWZ3001	RWZ3001	
NSP	Encode unit	RWZ2743	RWZ2743	RWZ2797	RWZ2797	
NSP	Decode unit	RWZ2744	RWZ2744	RWZ2798	RWZ2798	
Δ	AC power cord	ADG1036	PDG1013	ADG1036	ADG1036	
Δ	T1 Power transformer (AC220 – 230/240V)	RTT1201	.....	RTT1202	RTT1202	
Δ	T1 Power transformer (AC110/120 – 127/220/240V)	.....	RTT1236	.....	.....
Δ	Voltage selector (AC110/120 – 127/220/240V)	.....	PSB1002	.....	.....
\odot	Mechanism unit	RYM1185	RYM1185	RYM1216	RYM1216	
	FL filter	RAH1836	RAH2274	RAH1836	RAH1836	
	Front panel	RAH2280	RAH2303	RAH2281	RAH2282	
	Screw	ABA1131	ABA1131	.....	.....
	Side spacer	PEB1187	PEB1187	.....	.....
	Side plate spacer	PNM1150	PNM1150	.....	.....
	Slide SW knob	RAC1540	RAC1540	RAC1562	RAC1540	
	Power button	RAC1657	RAC1657	RAC1703	RAC1657	
	Operation button	RAC1658	RAC1658	RAC1704	RAC1658	
	Balance knob	RAC1662	RAC1662	RAC1705	RAC1662	
	VR knob assembly A	RXA1563	RXA1563	.....	.....
	VR knob	.....	.....	RAC1707	RAC1708	
	Side panel	RAH1931	RAH1931	.....	.....
NSP	Door	RNK1756	RNK1756	.....	.....
	Door	.....	.....	RAH2275	RAH2132	
	VR ring	RAT1012	RAT1012	RAT1011	RAT1012	
	Screw	RBA1088	RBA1088	FBT40P080FZK	RBA1088	
	Screw	RBA1088	RBA1088	.....	.....
	Collar	RAT1002	REA1002	.....	.....
	Door assembly	RNT1176	RNT1176	RNT1177	RNT1178	
	Panel stay	RXX1427	RXX1427	RXX1518	RXX1506	
	Bonnet	.....	.....	.....	.....

Mark	Symbol & Description	Part No.				Remarks
		CT-95/ HEM	CT-95/ SD	CT-S920S/ HEM	CT-S920S-G/ HEM	
NSP	Badge	RAN1011	RAN1011	.....	RAN1011	
	Name plate	.....	.....	VAM1032	.....
	Rear panel	RNA1718	RNA1719	RNA1720	RNA1721	
	Door panel	RAH2133	RAH2133	.....	.....
NSP	Door badge	RAN1006	RAN1006	.....	.....
NSP	Transformer sheet	REE1004	REE1004	.....	.....
NSP	Main chassis	RNB1042	RNB1042	RNB1059	RNB1059	
NSP	Center stay	RNC1088	RNC1088	RNC1058	RNC1058	
NSP	Center stay	RNC1089	RNC1089	RNC1059	RNC1059	
NSP	PS holder	RNE1185	RNE1185	.....	.....
NSP	Bonnet bracket	RNE1470	RNE1470	.....	.....
	Packing case	RHG1489	RHG1490	RHG1491	RHG1492	
	Pad (F)	RHA1073	RHA1073	RHA1119	RHA1119	
	Pad (R)	RHA1074	RHA1074	RHA1118	RHA1118	
	Connection cord with mini plug	.....	PDE - 319	PDE - 319	PDE - 319	
	Connection cord assembly	RDE1013	RDE1013	RDE1002	RDE1002	
	Operating instruction (German/Italian/Dutch/Swedish/ Spanish/Portuguese)	RRD1138	.....	RRD1138	RRD1138	

CONTROL UNIT

RWZ2990, RWZ2996 and RWZ2984 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		RWZ2984	RWZ2990	RWZ2996	
	D665	1SS254	1SS254	.....
	C717	.....	CKCYF103Z50	CKCYF103Z50	
	CN200 connector	TXC - P15X - A1	TXC - P15X - A1	TXC - P14X - A1	
	JA72, JA73 Remote control jack	.....	RKN1004	RKN1004	

BAL. VR UNIT

Although RWZ2991, RWZ2997 and RWZ2985 are different in part number, they consist of the same components.

FL UNIT

RWZ2992, RWZ2998 and RWZ2986 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		RWZ2986	RWZ2992	RWZ2998	
	D735 - D737	.....	1SS254	1SS254	
	L701 - D703	PTH1008	PTH1008	.....
	R735	RD1/8PM223J	RD1/8PM274J	RD1/8PM274J	
	R736	.....	RD1/8PM102J	RD1/8PM102J	

OPERATION UNIT

Although RWZ2993, RWZ2999 and RWZ2987 are different in part number, they consist of the same components.

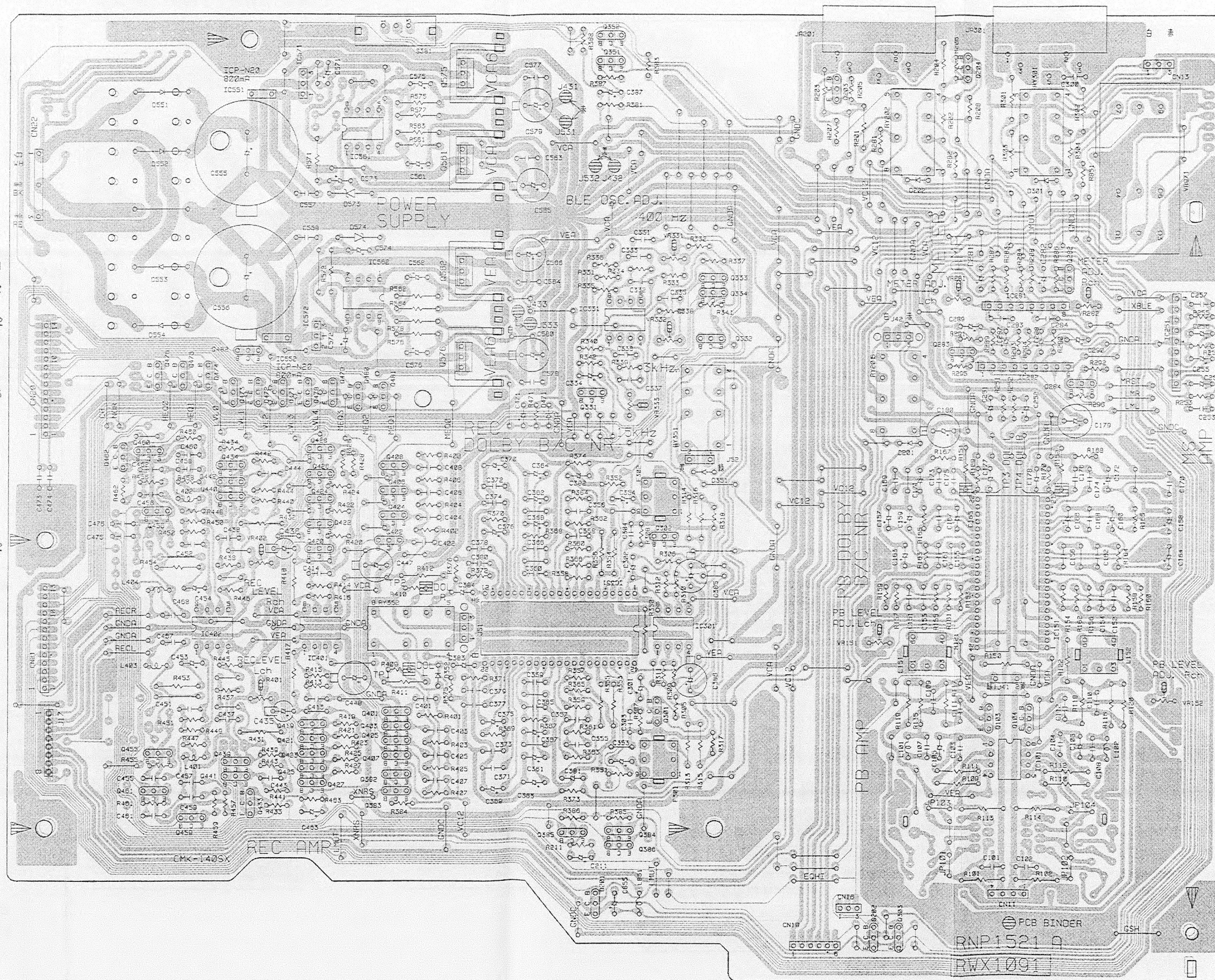
PCB DIAGRAM

• View from component side

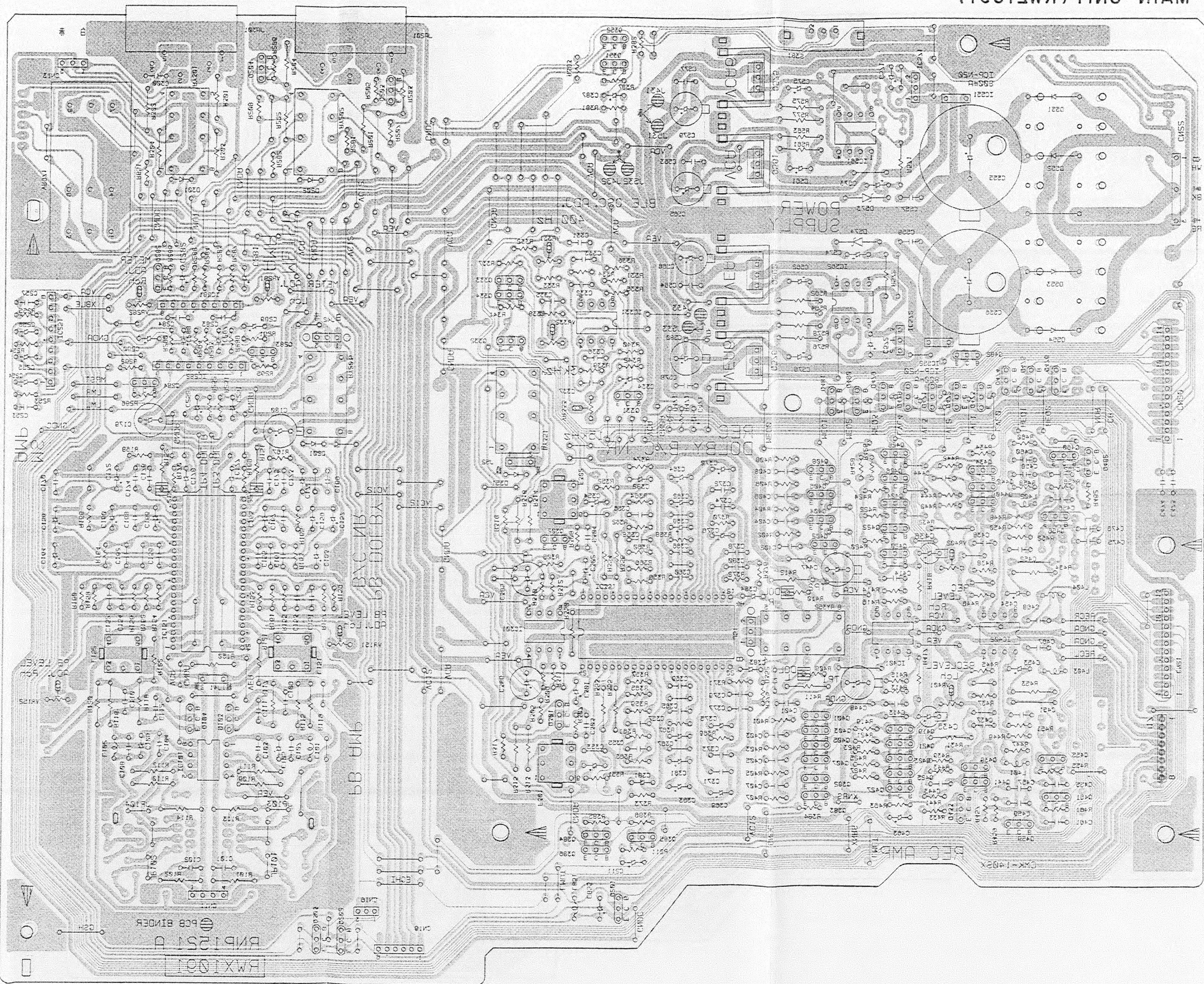
CT-S920S, CT-S920S-G

MAIN UNIT (RWZ1091)

			Q352	
			Q351	Q204
		IC571	Q575	Q203
		IC551		
		IC561		
			Q561	
		VR331		
			Q333	Q282
			Q562	IC281
		IC582	Q334	
			IC331	
			IC572	Q332
				Q283
		Q482	Q476	Q572
		Q474		IC282
		Q475		Q284
		Q476	Q471	Q334
			Q479	
		Q462	Q481	
		Q460	Q428	
		Q434	Q406	
		Q442	Q426	
		Q440	Q406	
		Q456	Q404	
		Q422	Q302	
		Q402		
		Q420		
		VR402		
			IC151	
		IC402	IC401	IC351
				IC301
		VR151		
		VR152		
		VR401		
			Q401	Q301
			Q419	Q103
			Q403	Q104
			Q421	
			Q405	
		Q455	Q423	IC101
		Q441	Q407	
		Q461	Q425	
		Q433	Q382	
		Q459	Q427	Q384
			Q383	Q385
				Q386
			Q201	Q202
				Q203

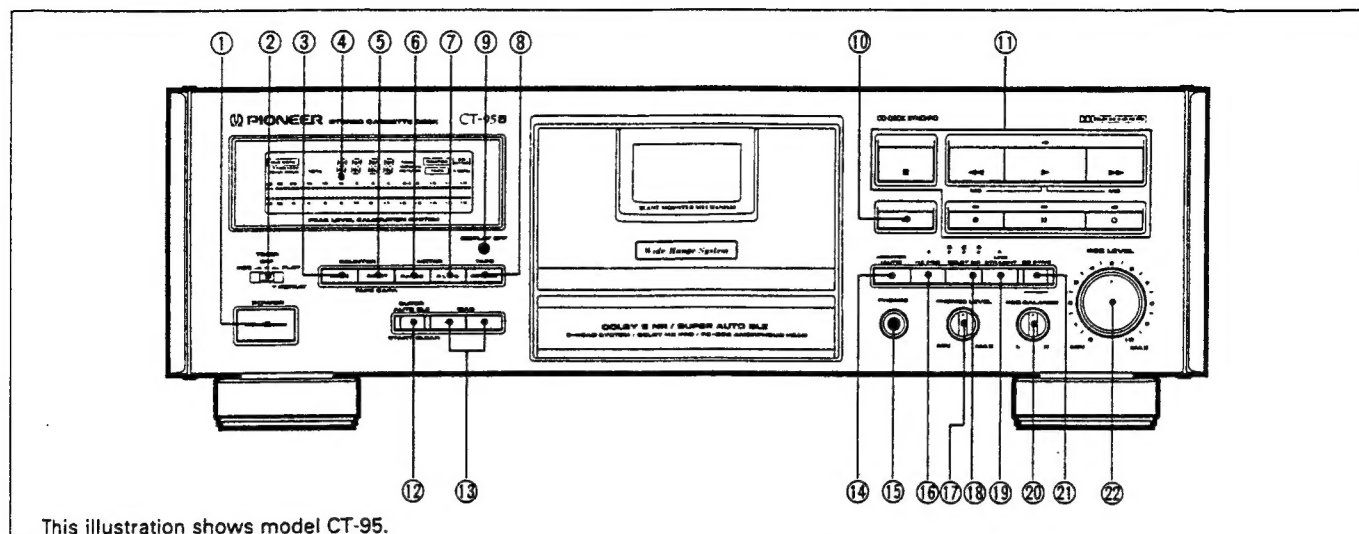


MAIN UNIT (RWZ1091)



0503	0501	0505
0388	0382	0388
0388	0382	0388
0384	0385	0384
0407	0407	0407
0481	0481	0481
0441	0440	0441
0438	0438	0438
0432	0432	0432
0408	0408	0408
0408	0408	0408
0451	0451	0451
0403	0403	0403
0419	0419	0419
0401	0401	0401
0301	0301	0301
1010	1010	1010
0104	0104	0104
0103	0103	0103
10405	10401	10401
10301	10301	10301
10321	10321	10321
10121	10121	10121
0450	0450	0450
0405	0405	0405
0405	0405	0405
0434	0434	0434
0430	0430	0430
0445	0445	0445
0408	0408	0408
0454	0454	0454
0404	0404	0404
0455	0455	0455
0305	0305	0305
0478	0478	0478
0479	0479	0479
0324	0324	0324
0584	0584	0584
10585	10585	10585
0582	0582	0582
10321	10321	10321
0334	0334	0334
0332	0332	0332
0585	0585	0585
0281	0281	0281
10281	10281	10281
10281	10281	10281
0281	0281	0281
0503	0503	0503
0504	0504	0504
0385	0385	0385

8. PANEL FACILITIES



This illustration shows model CT-95.

① Power switch (POWER)

After pressing the switch, the WAIT message will appear in the counter display and the level meter scale will flash for about four seconds (the time necessary for circuitry to stabilize). During the time the display is flashing, no operating buttons will respond, with the exception of the cassette door open/close button (▲). To close the cassette door, do it while the power is turned on.

② TIMER mode/repeat play switch (TIMER REC/OFF/PLAY-REPEAT)

REC: Set to this position to perform timer recording.

OFF: Set to this position under ordinary conditions, (when not using the timer or repeat functions).

PLAY-REPEAT:

Set to this position to perform timer playback. When the switch is set to this position during normal playback, repeat playback of a single tape can be performed.

③ Counter mode button (COUNTER MODE)

Each time this button is pressed, one of the three modes (Normal tape counter/Timer counter/Remaining time counter) is set in sequence.

④ Function display

⑤ Counter reset/tape capacity selector button (COUNTER RESET/TAPE CAPA)

Reset the counter indication to "0000" in the normal tape counter or the time counter mode.

To indicate the correct time value in the remaining time counter mode, this button must be set in accordance with the tape used.

⑥ Level meter mode selector button (METER MODE)

Switches between wide range, expanded range, and bias display.

⑦ Level meter PLCS mode button (METER PLCS)

Selects the display mode of the peak level.

When press this button so that the PEAK HOLD indicator lights up, the level meter holds the maximum level indications of the signal. To erase the maximum level indications, press this button again. When the PEAK HOLD indicator goes off, the level meter holds peak indications for about 1.2 second.

[For METER PLCS Button]

In addition to the peak level display noted above, the button can also be used with the peak level calibration system to adjust tape recording levels.

⑧ Tape return button (TAPE RETURN)

This button is used in the normal tape counter mode to fast forward or rewind the tape to a point near the counter reading "0000".

⑨ Display off button (DISPLAY OFF)

Press this button to turn off the function display.

⑩ Open/Close button (▲)

Press this button to open or close the cassette door. Whenever inserting or removing a cassette tape, be sure that the power is turned on.

NOTE:

If the cassette door is closed while the unit is turned off, and the power is then turned on, the cassette door may open and close after pressing one of the operation buttons. This occurs when the microprocessor resets the door mechanism to its initial state and does not indicate any malfunctioning of the unit.

⑪ Operation buttons

- : Stop
- ◀◀ : Rewind/music search
- ▶▶ : Playback
- ▶▶▶ : Fast forward/music search
- : Recording
- || : Pause
- : Recording mute

⑫ SUPER AUTO BLE START/CLEAR button

⑬ Recording bias buttons (BIAS -/+)

When desired, these buttons can be used to manually adjust the recording bias after performing AUTO BLE tuning.

- : Changes tone by reducing recording bias
- + : Changes tone by increasing recording bias

⑭ Monitor selector button (MONITOR [AUTO])

Used to monitor the source sound or adjust recorded sound during recording.

- When the unit is set to record or playback mode, the TAPE indicator lights up and monitor mode is automatically selected.

⑮ Headphones jack (PHONES)

⑯ DOLBY* HX PRO ON/OFF button/indicator

Press to turn the Dolby HX PRO system on and off.

⑰ Headphones level control (PHONES LEVEL)

⑱ DOLBY* NR button (OFF/B/C/S)

Press to select the Dolby NR system in the following order. The selected indicator lights up on the display.

OFF → B → C → S
(indicator will go off)

*

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
- "DOLBY", the double-D symbol and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

CT-95, CT-S920S, CT-S920S-G

- ① LINE STRAIGHT button/indicator
- ② Recording balance control (REC BALANCE)
- ③ CD · DECK SYNCHRO recording button (CD SYNC)
- ④ Recording level control (REC LEVEL)

9. SPECIFICATIONS

System.....	4 track, 2-channel stereo
Heads	
Recording/playback head:	
Laser amorphous playback head and Laser amorphous recording head combination × 1	
Erasing head: Ferrite head with sendust guard × 1	
Motor	DC servo capstan motor × 1
	DC reel motor × 1
	DC auxiliary motor × 1
Wow and Flutter	No more than 0.022% (WRMS)
	No more than ±0.052% (DIN)
Fast Winding Time	Approximately 75 seconds (C-60 tape)
Frequency Response	
—20 dB recording:	
[CT-95]	
TYPE IV (Metal) tape.....	10 to 30,000 Hz (±6 dB)
TYPE II (HIGH/CrO ₂) tape.....	10 to 21,000 Hz (±6 dB)
TYPE I (Normal) tape	10 to 21,000 Hz (±6 dB)
[CT-S920S]	
TYPE IV (Metal) tape.....	10 to 25,000 Hz (±6 dB)
TYPE II (HIGH/CrO ₂) tape.....	10 to 21,000 Hz (±6 dB)
TYPE I (Normal) tape	10 to 21,000 Hz (±6 dB)
Signal-to-Noise Ratio (Dolby NR off)	
[CT-95]	More than 64 dB
[CT-S920S]	More than 63 dB
Noise Reduction Effect	
Dolby B-type NR ON	More than 10 dB (at 5 kHz)
Dolby C-type NR ON	More than 19 dB (at 5 kHz)
Dolby S-type NR ON	More than 22 dB (at 5 kHz)
Harmonic Distortion.....	No more than 0.6% (—4 dB)
Input (Sensitivity)	
LINE (INPUT)	95 mV (Input impedance 47 kΩ)
Output (Reference level)	
LINE (OUTPUT)	0.5 V (Output impedance 1.8 kΩ)
Headphone	5.5 mW
	(Load impedance 8 Ω, PHONES LEVEL control max.)

Subfunctions

- SUPER AUTO BLE system
- Bias control
- Dolby HX Pro Headroom Extension system (on/off possible)
- Dolby S-type noise reduction system
- Dolby B-type and C-type noise reduction systems
- MPX filter
- Level meter with 2 modes peak hold selection (16 + 1 segments)
- Level meter range selection (wide/expanded)
- Peak level calibration system
- 4-digit electronic tape counter with mode selection
- Auto monitor selection (Tape/Source)
- Display off
- Music search (over ±15 selections)
- Automatic Tape Loose Canceller (ATLC)
- Tape return/Return play
- Auto space recording mute
- Auto tape selector
- Line straight
- Playback/recording timer start function
- CD · DECK SYNCHRO recording
- Headphones jack with level control
- Power eject (Open/Close)
- Repeat playback
- System remote control available (Except for CT-95 European model)
- Last memory

Miscellaneous

Power Requirements	
European model.....	AC 220—230 Volts~, 50/60 Hz
U.K. model.....	230—240 Volts~, 50/60 Hz
U.S. and Canadian model.....	AC 120 V, 60 Hz
Multivoltage model.....	AC 110/120—127/220/240 V (switchable), 50/60 Hz
Power Consumption	
[CT-95]	29 W
[CT-S920S].....	27 W
Dimensions	440 (W) × 144 (H) × 375 (D) mm
	17-1/3 (W) × 5-5/8 (H) × 14-3/4 (D) in.
Weight (without package)	
[CT-95]	8.6 kg (18 lb. 15 oz.)
[CT-S920S].....	8.0 kg (17 lb. 10 oz.)

Accessories

Operating instructions	1
Connection cord with pin plugs	2
CD · DECK SYNCHRO control cord	1
Remote control cord	1

NOTE:

Specifications and design subject to possible modification; without notice, due to improvements.